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NEWTON'S TELECOM DICTIONARY

The Official Dictionary of Telecommunications & the Internet

16th Updated, Expanded and Much Improved Edition

Appendix A

Systems General Licence. A British term. A
st be obtained by any organization seeking to
twork to the British PSTN (Public Switched
ork). A separate licence must be held on

ndards Institution. The body responsible for
UK standards across a wide range, including
ions. BSI also is responsible for input to
rds bodies like CEN and CENELEC, as well
standards bodies such as the ISO and the
rs to be the oldest of the over 100 national
s in the world. www.bsi.org.uk. For the U.S.
also ANSI.

dion Identity Code. An attribute of a GSM
for Mobile Communications) cell which is a
distinction between local cells having the
uency.

stem Practice. A very defined way of writing
instruction and installation manuals. BSPs
standards for splicing cable, for installing
ng phones, collecting debts, finding phone
oles. They are (or once were) the instruction
dated how to do everything. Divestiture has
es. BSPs are not as important as they were
ded down all the BSP's.

Protector. David Bomelyn, an engineer who
lar phone out west, claims that "a BSP is the
overing of a book or some technical manual
ich keeps in his or her back pocket or by turn
most cases when this book is pulled out, the
lam and his or her butt is most likely is pick-
ating and we don't want the pages in this book
vid claims the definition was originally pub-
storola Dictionary book. Apparently, "The big
s didn't know it was in their dictionary. Some
t in. When the powers to be found out, they
d the dictionary, never to been seen again. So
e world a favor and bring this back to life and
ne techs a good laugh."

am Reference Frequency. See Timing.

ation System. A wireless telecommunications
Global System for Mobile Communications)
with managing radio frequency resources
ency transmission for a group of BTSs. See

pport System. The system used by network
anage business operations such as billing,
ent, customer-service management and cus-
A type of Operations Support System (OSS).
witching System. A carrier (e.g., LEC or IXC)
dband communications. Such switches are
ching frames (Frame Relay) or cells (SMDS
very high rate of speed. They contain multi-
which may be stacked or chained. For exam-
witch, which is located at the edge of the net-
s a Class 5 Central Office in the voice world,
0 Gbps bus. "Core" switches, which are locat-
of the network and which are the equivalent of
in the voice world, may involve eight busses
s for a total capacity of 160 Gbps.

Tecom. See 1981.

ver. BT applies to ATM connections support-

term. The United States is broken down into 493 major trading areas for economic purposes. These boundaries were used for licensing PCS wireless phone systems. Several BTAs make up Metropolitan Trading Area, an area defined by the FCC for the purpose of issuing licenses for PCS. Thus, each MTA consists of several Basic Trading Areas (BTAs).

2. Broadband Telecommunications Architecture, an architecture introduced by General Instrument's Broadband Communications Division at the Western Cable Television Show on December 1, 1993. General Instrument said the plant is built to 750 MHz and can support reduced node size and add services such as video-on-demand, telephony, interactivity, data services, etc.

3. Business Technology Association. Previously NOMDA/LANDA, BTA was formed by the merger of the National Office Machine Dealers Association and the Local Area Network Dealers Association. BTA holds several conferences a year. Members include manufacturers, distributors, retailers and consultants. www.btanet.org

BTAM Basic Telecommunications Access Method. One of IBM's early host-based software programs for controlling remote data communications interface to host applications, supporting pre-SNA protocols. See IBM.

BTag An ATM term. Beginning Tag. A one octet field of the CPCS_PDU used in conjunction with the Etag octet to form an association between the beginning of message and end of message. See ATM.

BTI British Telecom International.

BTL Bell Telephone Laboratories.

BTN Billed Telephone Number. The primary telephone number used for billing, regardless of the number of phone lines associated with that number. According to Bellcore, BTN is sometimes known as a screening telephone number. The BTN is a telephone number used by the AMA process as the calling-party number for recording purposes. See Billing Telephone Number.

BTO Built To Order. PC makers like Toshiba and Dell are delivering PCs and notebooks that contain the hardware specifications that you particularly want — RAM, size of hard disk, etc.

BTOS A UNIX program which translates binary files into ASCII.

BTRL British Telecom Research Laboratories.

Btrieve Btrieve is a key-indexed database record management system. You can retrieve, insert, update, or delete records by key value, using sequential or random access methods. First introduced in 1983, Btrieve was one of the first databases designed for LANs. Novell bought the company in the late 1980s and then later sold it. It's now called Pervasive Software.

BTS Base Transceiver Station. A wireless telecommunications term. A GSM (Global System for Mobile Communications) device used to transmit radio frequencies over the air interface.

BTSM BTS (Base Transceiver Station) Management. A wireless telecommunications term. Devices configured to manage BTS functions and equipment.

BTSOOM Beats The S*** Out Of Me. Acronym used in e-mail, during online chat sessions, and in newsgroup postings.

BTU 1. Basic Transmission Unit.

2. British Thermal Unit. A measure of thermal energy often used in designing building heating and cooling systems. For

tral systems. Computer equipment heat output is expressed in BTU per hour. 3.7 BTU per hour is equivalent to 1 Watt of dissipation.

BTV See Business Television.

BTW By The Way. An acronym used in electronic mail on the Internet to save words or to be hip, or whatever.

Bucket RMON terminology for a discrete sample of data. The RMON History group specifically uses buckets in its sampling functions of the different data sources. See Buckets.

Bucket o' Dial Tone Once upon a time, every new central office technician was sent to another central office for a "bucket o' dial tone," when the CO was overloaded. There is no such thing, of course, but the old hands had a big laugh over it. It was sort of a "right of passage." It worked only once. See also Fiber Exhaust and Frequency Grease.

Buckets When competition in cell phones heated up in North America in the mid-1990s, some of the newer competitors pushed increased coverage patterns, small phones, and huge packages of monthly minutes so large that their salespeople started calling the deals "buckets."

Buffer 1. In data transmission, a buffer is a temporary storage location for information being sent or received. Usually located between two different devices that have different abilities or speeds for handling the data. The buffer acts like a dam, capturing the data and then trickling it out at speeds the lower diver can handle without, hopefully, flooding or overflowing the banks. A buffer can be located in the sending or receiving device.

2. A coating material used to cover and protect the fiber. The buffer can be constructed using either a tight jacket or loose tube technique.

3. A circuit or component which isolates one electrical circuit from another.

Buffer Box A collection device connected to a host phone system (PBX) that collects, stores and reports data from the host phone system. Such a box could be used to collect information on phone calls and have that information downloaded once a month by a remote call accounting service and then assembled into reports, showing who made the most calls, the most expensive calls, etc. A buffer box would typically be attached to a PBX by a serial cable. A buffer box would have some of the ingredients of a PC — a microprocessor and a storage device (e.g. hard disk).

Buffer Coating Protective material applied to fibers. Increases apparent fiber size. May be more than one layer. Stated in microns. Usually thicker on multi-coated on tight-buffer cables.

Buffer Memory Electronic circuitry where data is kept during buffering. See Buffer.

Buffer Storage Electronic circuitry where data is kept during buffering. See Buffer.

Buffered Repeater A device that amplifies and regenerates signals so they can travel farther along a local area cable. This type of repeater also controls the flow of messages to prevent collisions.

Bug 1. A concealed microphone or listening device or other audio surveillance device.

2. To install the means for audio surveillance.

3. A semiautomatic telegraph key.

4. A problem in software or hardware. The original computer bug, a moth, is enshrined at the Washington Navy Yard. It was the cause of a hardware failure in an early computer in 1945. Suddenly, in the middle of a calculation, the computer ground to a halt, dead. Engineers poured over every wire and every inch of the massive machine. Finally, one of the technicians discovered the cause of the problem. Buried deep inside its electronic innards, crushed between two electric relays, lay the body of a moth. These days, "bugs" in telecom or computer systems are not insects. They're indescribable glitches that adversely affect smooth operations. Bugs usually originate in software. Some programmers call bugs "undocumented features." And they are, indeed. All the above is the story the navy likes to put out. In fact, the word "bug" for problem in design has been around for eons. It's mentioned in a 1910 book called "Edison, His Life and Inventions" by Frank Lewis Dyer. The book talks about Edison harassing his employees to "get all the bugs out."

Bug Mix A utility term for the precise collection of bugs in a particular piece of software.

Bug Rate The frequency with which new bugs are found during the testing cycle is referred to as the bug rate. As these bugs are fixed, and as time passes, bugs will become more and more difficult to find, and new bugs will be found less frequently, i.e., the bug rate decreases. Usually, when the bug rate drops to zero and all major bugs (and most of the minor bugs) have been fixed, a product is ready for the next stage in its lifecycle.

Building Core A three-dimensional space permeating one or more floors of the building and used for the extension and distribution of utility services (e.g., elevators, washrooms, stairwells, mechanical and electrical systems, and telecommunications) throughout the building.

Building Distribution Frame Somewhere in the building where all telephony wiring for the building is. All the cables from the outside the building would first come here and be punched down on the building distribution frame. Additional cables would take the telephone circuits upstairs.

Building Entrance Agreement A piece of paper that lets phone companies and utilities enter a building, gives them permission to build facilities and store equipment and lets them access their equipment. In great demand by Competitive Local Exchange Carriers (CLECS) who give residents a choice of providers and often force existing carriers to improve services or reduce rates. Often the CLECS are charged less, which they agree to, to avoid paying the RBOCs' access charges.

Building Entrance Area The area inside a building where cables enter the building and are connected to riser cables within the building and where electrical protection is provided. The network interface as well as the protectors and other distribution components for the campus subsystem may be located here. Typically this area is the end of the local telephone company's responsibility. From here on it's your responsibility. You should protect your equipment inside the building from spikes and surges and other electrical nonsenses which the phone company's cables might bring in. For the best disaster protection, it's wise to have two building entrances by which your telecommunications cables can enter. And they should enter from separate telephone central offices. Some telephone companies, e.g. New York Telephone, are now tariffing such services. See Building Entrance Agreement.

Building Footing The concrete base under the foundation of a building in which copper wire may be laid to form an

NEWTON'S TELECOM DICTIONARY

DIX Digital/Intel/Xerox. The early 1980s consortium of manufacturers that promoted the Ethernet Version 1 and Ethernet Version 2 variations of a CSMA/CD media access protocol. This DIX "standard" was then submitted to the IEEE, where after some modifications it was released as IEEE Standard 802.3. The DIX version did not include specifications for UTP or Fiber Optic cable.

DIX Connectors A local area network connector. DIX connectors on the transceiver local area network cable link it to the network; the male DIX connector plugs into the SpeedLink/PC16 and the female DIx connector attaches to an external transceiver.

DIX Ethernet The DEC, Intel, Xerox Ethernet standard, also known as Version 1 or Bluebook Ethernet. There are subtle differences between IEEE 802.3 and the DIX Ethernet.

DL 1. Distribution List.

2. Distance Learning.

DLC 1. Digital Loop Carrier. Network transmission equipment used to provide pair gain on a local loop. The digital loop carrier system derives multiple channels, typically 64 Kbps voice-grade, from a single four-wire distribution cable running from the central office to a remote site. In the traditional deployment, Central Office Termination (COT) comprises multiplexing equipment in the central office (CO). A four-wire, twisted-pair circuit is deployed from the CO to the remote location at the point of Remote Termination (RT), where it terminates in matching DLC electronics. From the remote node, the interface is joined to individual voice-grade local loops which extend to the individual customer premises. Effectively, traditional DLCs are channel banks — devices which multiplex and demultiplex multiple channels over a high-bandwidth, electrical distribution facility. Such DLCs are used in situations in which the cost of the equipment is more than offset by the savings in distribution facilities through eliminating the need for a large number of individual copper pairs. Traditional DLCs also are known as SLCs (Subscriber Loop Carrier systems).

In a more contemporary scenario, the carriers deploy high-bandwidth fiber optic facilities from the COT to the RT. The carrier electronics at each end accomplish the optoelectric conversion process, as well as that of multiplexing/demultiplexing. The final leg of the local loop remains embedded twisted pair. This type of system can be characterized as a hybrid local loop system. Given the high cost of such conversion process, DLCs offer clear advantages in comparison to FTTC (Fiber-To-The Curb) and, certainly, to FTTH (Fiber-To-The-Home). Additionally, the deployment of fiber optic distribution facilities yields much greater aggregate bandwidth — typically a minimum of 51.84 million bits per second, which is the optical equivalent of 45 million bits per second (T3) in the electrical world. See also SLC, Channel Bank, and Multiplexer.

2. See Data Link Control.

3. Direct Line Console. An AT&T Merlin term. An answering position used by system operators to answer calls, transfer calls, make calls, set up conference calls, and monitor system operations. Calls can ring on any of the line buttons, and several calls can ring simultaneously (unlike the DCC where calls are sent to a common DCC queue and wait until a DCC is available to receive a call).

DLCI Data Link Connection Identifier. A Frame Relay term defining a 10-bit field of the Address Field. The DLCI identifies the data link, and its primary properties, such as frame format, Committed Information Rate (CIR), Committed Burst Size (Bc), Excess Burst Size (Be), and Committed Rate Measurement Interval (Tc). See Triple Address.

DLE Data Link Escape. A control character used exclusively to provide supplementary line control signals, control character sequences or DLE sequences, in packet switching. Data Link Escape is a name applied to the Control P non-print character which is used to swap the PAD from the data mode to its command mode in packet switched networks.

DLEC Data Local Exchange Carrier. A company which delivers high-speed access to the Internet, and not voice.

DLL 1. Dynamic Link Library. A feature of OS/2 and Windows that allow executable code modules to be loaded on demand and linked at run time. This lets library code be field-updated — transparent to applications — and then unloaded when they are no longer needed. Unlike a standard programming library, whose functions are linked into an application when the application's code is compiled, an application that uses DLL links with those DLL functions at runtime. Hence, the term dynamic.

2. Data Link Layer driver. A driver specification developed by DEC primarily to work with DECnet PCSA for DOS. DLL is a shared driver specification, allowing multiple protocol stacks to share a single network interface card.

DLPI An AT&T term. UNIX International, Data Link Provider Interface (DLPI) Specification. Revision 2.0.0. OSI Work Group, August 1991.

DLR Design Layout Report. A description of how a circuit is engineered. Often used between LECs and CLECs. See LEC and CLEC.

DLS Data Link Switching. IBM's method for carrying SNA and NetBIOS over TCP/IP operating at the Data Link layer. DLS, now an open Internet spec, can be used with OSPF or PPP.

DLSE Digital Line Service Evaluation.

DLSw Data Link Switching Workgroup. This workgroup has issued a new interoperability standard for integrating SNA and NetBIOS over the TCP/IP protocol. According to Cisco, the new DLSw standard provides interoperability and functionality not currently offered by Informational RFC 1434 in existing DLSw implementations.

DLTU Digital Link Trunk Unit. An AT&T term for a device which provides the interface to digital trunks and lines such as T-1, EDSL, and remote line units.

DM Delta Modulation.

DMA 1. Direct Memory Access. A fast method of moving data from a storage device or LAN interface card directly to RAM which speeds processing. In essence, DMA is direct access to memory by a peripheral device that bypasses the CPU.

2. Direct Marketing Association.

3. Document Management Alliance.

4. Designated Market Area. This term specifies the geographic area established by Nielsen Media Research for the purpose of rating the viewership of commercial television stations. DMAs represent the geographic areas covered by groups of competing commercial television broadcast stations. The boundaries of these areas are of considerable financial importance to the stations involved because they determine the number of viewers each station can claim, and, hence, the dollar amount the station can charge for advertising time. Section 76.55(e) of the FCC Rules provides that, for the purpose of the cable television must-carry rules, the local market area of a commercial television broadcast station is the Nielsen DMA. A map showing DMA boundaries may be obtained from:

1290 Avenue of the Americas
New York, NY 10104-0061
212-708-7500

DMA Channel A channel for direct memory access that does not involve the microprocessor, providing data transfer directly between memory and a disk drive. See DMA.

DMB Digital Multipoint Bridge.

DMD Differential Mode Delay. A fiber optic term. DMD refers to the fact that multimode and monomode (single mode) fiber optic cabling systems differ considerably in their performance characteristics. Specifically and in a LAN environment, some multimode systems are not capable of supporting signals from high-performance laser diodes, which operate at very high speeds and which emit narrowly-defined pulses of light. Traditionally, LEDs (Light-Emitting Diodes), which operate at lower speeds and which emit light pulses of a broader range of frequencies, have been use in conjunction with multimode fiber systems. In a LAN environment, such a combination has proved very satisfactory, even at high speeds and over relatively long distances. The combination of LEDs and multimode fiber also is much less costly. Ethernet at 10/100 million bits per second, Token Ring at 4/16 million bits per second, and ATM at 25/155/622 million bits per second all have made use of this traditional combination. However, the emerging Gigabit Ethernet standard requires the use of laser diodes to achieve such speeds. Multimode fiber, at least in some cases, appears to underperform in this environment, even over short distances. The problem is DMD, which yields unacceptably unmanageable levels of signal delay. See Modal Dispersion.

DMI 1. Digital Multiplexed Interface. AT&T's Digital Multiplexed Interface. A PBX to computer interface that divides the T-1 trunk into 23 user channels and one signaling channel. Also used as a T-1 PBX to computer interface. See Open Application Interface.

2.Desktop Management Interface, a protocol independent management interface developed by the DMTF, the Desktop Management Task Force, a group working on improving network printing. Making network printers easier to use — more standard and easier to use — requires three basic elements: standardized definitions of printer objects, a protocol for communicating with those objects and an application interface.

Question: What is DMI?

Answer: The Desktop Management Interface (DMI) is a the result of a cooperative, industry-wide effort to make PC systems easier to manage, use and control. Specifically, DMI is a specification developed by the Desktop Management Task Force (DMTF), a consortium of hardware, software, and peripheral vendors. DMI describes hardware and software components in a format that can be easily accessed over a phone line by PC management applications and technical support personal. Thanks to DMI, technical support personnel and PC management applications can:

* Access an inventory of hardware and software components
* Access and change parameter values and settings
* View data generated by software agents and diagnostics routines

With DMI, technical support applications and PC management applications use a Management Interface (MI) to access data stored in Management Information Files (MIFs).

DMI-BOS Digital Multiplexed Interface-Bit Oriented Signaling. A form of signaling, which uses the 24th channel of each DSI to carry signaling information, allowing clear channel 64 Kbps transmission.

DMS Digital Multiplex Sy
ital central office switches
Nortel. There are DMS-1(
200s, DMS-250s, and DI
this, probably more.

DMT Discrete Multi-ton
signal processors to parti
of video, data, image and
one pair copper wiring
Northern Telecom, provid
* Four "A" channels at 1.
channel may carry a "VCR
nels may be merged to cr
signal. In the future, all fo
be able to transport an Ext
nificantly improved qualit
channels are asymmetric
the telephone company to
channels within ADSL are
* One ISDN "H zero" cha
and). This channel is c
multi rate ISDN Dialable V
voice. This channel could
to corporate LANs for
Northern Telecom's DataSt
* One ISDN Basic Rate ch
(64 Kbps) and one "D" ch
allows the home user to
ISDN services without re
the expense of a dedicate
mits the extension of Nort
conferencing to the home
* One signaling/control ch
the home user VCR-type c
vices provided on the "A
reverse, search, and pause
* Embedded operations ch
nance, audits, and telephe
* Finally, the home user c
over the same copper pair
mission channels listed a
coupled to the POTS line,
unimpaired in the event of

DMTE Desktop Manager

DMTF Desktop Manager
vendors working toward a
agement software which w
systems, their components
"standard groups" such
monitors, network interfac
ance devices, and mobile
accomplishments is the
Management Interface (DM

DN Directory Number or
number entries. DN is typ
with a telephone line. Th
number consists of four (
1. A + plus, which indicat
ever digits are necessary
U.S., the prefix is 011.
2. The country code. Th
Canada is 1. For Australia